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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,163	03/27/2001	Mike Binnard	PA0346-US/11269.35	1954

7590

06/19/2003

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EXAMINER

ESPLIN, DAVID B

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/818,163

Applicant(s)

BINNARD ET AL.

Examiner

D. Ben Esplin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 101 (intermediate chamber). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the intermediate chamber (claims 8-10, 24 and 25) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 4, 21, and 22 are objected to because of the following informalities:

Claim 4 depends from itself. This has been assumed by the Examiner to be a typo, and that claim 4 should depend from claim 3.

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Claims 21 and 22 include the recitation of "the piston connector" without a proper antecedent basis. For examination purposes, it has been assumed that these two claims should depend from claim 20, which would provide an antecedent basis, instead of claim 19.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17, 18, 31, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,036,162 to Hayashi.

Hayashi teaches of an exposure apparatus for producing semiconductor devices (col. 1 lines 21-35) that includes a vibration damping function. These claims are viewed to be product-by-process claims and thus the device or wafer claimed must be shown to be structurally different than a wafer or device produced by the prior art. Since Applicant has not distinguished any such structural differences, Hayashi anticipates the devices or wafers of these claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-16, 19-30, and 33-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,623,861 to Ward et al. in view of Hayashi.

FIGS. 1-3 of Ward show a pneumatic cylinder system including a first subsystem including a cylinder (chamber 32) and a first piston (piston head 14), and a second subsystem including a second cylinder (chamber 40) and a second piston (piston head 16). The first and second pistons moving along a first and second axis that are substantially coaxial. The system of Ward further includes a piston connector (piston rod 20) and an axial bore 44 for allowing the first and second chambers to be in fluid communication with each other. Ward also shows the pneumatic cylinder system including an intermediate chamber (chamber 34) and a bleed hole 50 for allowing the pressure inside of the intermediate chamber to be adjusted. FIG. 6 of Ward shows an alternative pneumatic cylinder system further including a third subassembly, coaxial with the first and second subsystems, with a third cylinder (chamber 40') and a third piston (piston head 16'), and a piston connector (piston rods 20 and 20') for connecting the first second and third pistons. The pneumatic cylinder system of Ward is not disclosed as a fluid mount included in an isolation system installed between an apparatus frame and a mounting base of an apparatus frame. However, FIG. 12 of Hayashi shows an exposure apparatus including pneumatic cylinder systems (air pressure type actuators 310A-310D) as part of an isolation system disposed between an apparatus frame and a mounting frame (floor 301 via mounting plates 314A and 314B). Therefore, it would have been obvious to dispose the pneumatic cylinder system of Ward as a fluid mount as part of an isolation system between an apparatus

frame of an exposure apparatus, as taught by Hayashi, in order to suppress vibrations in the exposure apparatus (see col. 4 lines 62-67 of Hayashi).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 4,773,306 to Dirkin discloses a cylinder assembly including a first and second assembly as defined by the claims.

U.S. Patent No. 5,341,725 to Dick discloses a piston and cylinder system that includes a first and second assembly as defined by the claims.

U.S. Patent No. 5,285,995 to Gonzalez et al. discloses an optical table using pneumatics to damp vibrations out of an optical system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Ben Esplin whose telephone number is (703) 305-4022. The examiner can normally be reached on Mon.-Fri. (8am-4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russell E. Adams can be reached on (703) 308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



DBE

June 12, 2003



RUSSELL ADAMS

SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800